

A.S. Engineering

ADVANCE Program Milestones

- Students must take SDV 100 or SDV 101 in the first semester at NOVA.
- Students must begin Developmental coursework in the first semester in ADVANCE at NOVA.
- Students must take first college-level MTH course and ENG 111 in the semester immediately following the completion of any MTT or ENF courses (excluding summer).
- In the first 30 credits, students must:
 - Complete ENG 111 and ENG 112 with a C or better.
 - Complete the first college-level MTH course with a C or better.
 - Engineering students must begin the calculus sequence and complete Calculus I and II with a B or better.
- Students must complete at least six degree-applicable credits with a C or better each fall and spring semester.
- Students must maintain a 2.5 cumulative GPA.
- Students must apply for NOVA graduation and complete their Associate's degree.

	NOVA DEGREE REQUIREMENT	Credits	Courses	MASON TRANSFER EQUIVALENT	MASON CORE/DEGREE EQUIVALENT
1	SDV Course	1	SDV 100 College Success Skills OR SDV 101 Orientation to Engineering	UNIV 100	Elective
2	ENG 111	3	ENG 111 College Composition I	ENGH 101	Written Comm
3	Social/Behavioral Sciences #1	3	HIS 101 History of Western Civilization I OR HIS 102 History of Western Civilization II OR HIS 112 History of World Civilization II	HIST 101 HIST 102 HIST 125	Western Civ
4	MTH 263	4	MTH 263 Calculus I	MATH 113	Quantitative
5	CST Course	3	CST 100 Principles of Public Speaking OR CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm
6	Technical Elective #1	4	CHM 111 College Chemistry I	CHEM 211-213	Nat Science
7	ENG 112	3	ENG 112 College Composition II	ENGH XXX	Elective
8	EGR 122	3	EGR 122 Engineering Design	ME 151	Major
9	MTH 264	4	MTH 264 Calculus II	MATH 114	Major
10	Humanities/Fine Arts #1	3	ART 100 Art Appreciation OR ART 101 History and Appreciation of Art I OR ART 102 History and Appreciation of Art II OR CST 130 Introduction to Theatre OR CST 151 Film Appreciation I OR MUS 121 Music Appreciation I	ARTH 101 ARTH 200 ARTH 201 THR 101 ENGH L372 MUSI 101	Arts
11	Social/Behavioral Sciences #2	3	ECO 202 Principles of Microeconomics	ECON 103	Soc/Behav
12	MTH 265	4	MTH 265 Calculus III	MATH 213	Major
13	Technical Elective #2	4	CSC 201 Computer Science I	CS 112	Info Tech
14	Technical Elective #3	3	EGR 240 Solid Mechanics (Statics)	ME 211	Major
15	PHY 231	5	PHY 231 General University Physics I	PHYS 160-161-266	Nat Science
16	Humanities/Fine Arts #2	3	ENG 236 Introduction to the Short Story OR ENG 241 Survey of American Literature I OR ENG 242 Survey of American Literature II OR ENG 251 Survey of World Literature I OR ENG 252 Survey of World Literature II OR ENG 253 Survey of African-American Literature I	ENGH 202	Literature
17	Technical Elective #4	3	EGR 246 Mechanics of Materials	CEIE L310 or ME 212	Major
18	PHY 232	5	PHY 232 General University Physics II	PHYS 260-261-XXX	Major

19	Technical Elective #5	3	EGR 245 Engineering Mechanics (Dynamics)	ME 231	Major
20	Technical Elective #6	3	EGR 248 Thermodynamics	ME 221	Major
21	MTH 267	3	MTH 267 Differential Equations	MATH 214	Major
A. S. ENGINEERING DEGREE		70			
TOTAL					
For academic policies and procedures, please see NOVA catalog - http://www.nvcc.edu/catalog/index.html					
B.S. Mechanical Engineering					
	MASON DEGREE REQUIREMENT	Credits	Course		MASON CORE/DEGREE EQUIVALENT
22	Engineering	3	ECE 330 Circuit Theory	Fall Only	Major
23	Gen Ed: Global Understanding	3	Approved Global Understanding course*		Global
24	Engineering	3	Approved Math/Science course**		Major
25	Engineering	1	ME 311 Mechanical Experimentation I	Fall Only	Major
26	Engineering	3	ME 313 Material Science		Major
27	Engineering	3	ME 322 Fluid Mechanics		Major
28	Engineering	3	ME 341 Design of Mechanical Elements OR ME 342 Design of Thermal Systems		Major
29	Engineering	3	ME 351 Analytical Methods in Engineering		Major
30	Gen Ed: Written Communication (UL)	3	ENGH 302 Advanced Composition (Natural Science Section)		Written Comm
31	Engineering	3	ME 331 Mechatronics	Spring Only	Major
32	Engineering	1	ME 321 Mechanical Experimentation II	Spring Only	Major
33	Engineering	3	ME 323 Heat Transfer	Spring Only	Major
34	Engineering	3	ME 352 Entrepreneurship in Engineering	Spring Only	Major
35	Engineering	3	ME 443 Mechanical Design I	Fall Only	Major
36	Engineering	2	ME 453 Developing the Societal Engineer	Fall Only	Major
37	Elective	3	300/400 Elective***		Major
38	Elective	3	300/400 Elective***		Major
39	Elective	3	300/400 Elective***		Major
40	Elective	3	300/400 Elective***		Major
41	Engineering	4	ME 432 Control Engineering		Major
42	Gen Ed: Synthesis/Engineering	3	ME 444 Mechanical Design II	Spring Only	Synthesis & Writing Intensive
B.S. MECH. ENGINEERING DEGREE TOTAL		129			
Denotes a course that must be taken at George Mason University. Please see your Success Coach to enroll.					
*For approved Mason Core courses, please visit - https://catalog.gmu.edu/mason-core/ . If ADVANCE students have at least a 2.85 GPA at the time of matriculation to Mason, students will receive a lower-level General Education waiver and do not need to take this course. Please see your Success Coach for more information.					
**For approved Math/Science Electives, please visit: https://catalog.gmu.edu/colleges-schools/engineering/mechanical/mechanical-engineering-bs/#requirementstext					
***For 300/400 Electives, any Mason course numbered 300 or higher can be used please visit: https://catalog.gmu.edu/					
For academic policies and procedures, please see Mason catalog - https://catalog.gmu.edu/policies/					
Students seeking a bachelor's degree must apply at least 45 credits of upper-level courses (numbered 300 or above) toward graduation requirements.					